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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,000	02/26/2004	Thomas M. Mayers	2033.80621	9213
45455 7590 12/16/2009 GREER, BURNS & CRAIN, LTD. 300 SOUTH WACKER DRIVE SUITE 2500 CHICAGO, IL 60603				
EXAMINER CHEVALIER, ALICIA ANN				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
12/16/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/789,000

**Applicant(s)**

MAYERS ET AL.

**Examiner**

ALICIA CHEVALIER

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **RESPONSE TO AMENDMENT**

### ***Request for Continued Examination***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 16, 2009 has been entered.
2. Claims 1-9 and 15-17 are pending in the application, claims 15-17 have been cancelled.
3. Amendments to the claims, filed on November 16, 2009, have been entered in the above-identified application.

### ***REJECTIONS***

4. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

### ***Claim Rejections - 35 USC § 103***

5. Claims 1-9 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kahara et al. (U.S. Patent No. 5,753,871) in view of Baig (U.S. Patent Application Publication No. 2002/0139611) and Forry et al. (U.S. Patent No. 4,585,685).

Regarding Applicant's claim 1, Kahara discloses a cast acoustical ceiling tile (*title*) having a core made from a starch gel and mineral wool fiber composition with the starch gel

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ranging from 75 to 83 weight percent of the core composition and the mineral wool fibers ranging from 17 to 25 weight percent of the core composition (*col. 2, lines 33-39*). The starch gel comprises at least about 82.7 weight % water (*col. 2, lines 21-29*).

Kahara fails to disclose wherein the front surface of the tile is coated with aggregate particles.

Baig '611 discloses an acoustical ceiling tile with improved sound absorption (*title*) having a core (*fiber rich surface layer made of mineral wool fibers, paragraph 0021*) made from a starch gel (*starch binder of starch in the form of a gel, paragraph 0027*) and mineral wool fiber (*fiber rich surface layer made of mineral wool fibers, paragraph 0021*) composition, wherein the front surface of the tile is coated with aggregate particles (*calcium carbonate particle coating, paragraph 0061*).

Baig '611 further discloses that the particles are coarse (*paragraph 0061*). It is noted that Applicant defines coarse particles as to have a mean diameter of 2,500 microns (*specification page 9, lines 28-30*). Therefore, Baig '611 is deemed to disclose particles with a mean diameter of 2,500 microns, which read on Applicant's claimed aggregate particles having an average particle mean diameter of at least about 1,000 microns.

Baig '611 fails to specifically disclose the aggregate particles are pressed into the front surface.

Forry discloses an acoustically porous building material (*title*) having a core (*dry-formed web, col. 3, lines 9-10*) made from a starch gel (*organic binder pregelled starch, col. 3, lines 64-66*) and mineral wool fiber (*fibrous material mineral wool, a.k.a. rock wool, col. 3, lines 56-57*) composition, wherein the front surface of the tile is coated with aggregate particles (*col. 3, lines*

11-21 and figure 1). The aggregate particles are pressed into the front surface, which creates a relatively non-friable surface (*col. 3, lines 2-3 and figure 3*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add a layer of aggregate particles as taught by Baig '611 to Kahara in order to improve sound absorption. Furthermore, it would have been obvious to one of ordinary skill in the art to press, embed, the aggregate particles in the front surface as taught by Forry in the combination of Baig '611 and Kahara in order to make the surface relatively non-friable.

The limitation "abuse-resistant" is a functional limitation and is deemed to be a latent property of the prior art since the prior art is substantially identical in composition and/or structure. MPEP 2145 (II).

Regarding Applicant's claims 2 and 3, Baig '611 discloses that the aggregate particles are selected from the group consisting of calcium carbonate, crushed marble, sand, clay, perlite, vermiculite, crushed stone and glass (*page 6, paragraph [0061]*). Furthermore, the aggregate particles are specifically calcium carbonate (*calcium carbonate particle coating, page 6, paragraph [0061]*).

Regarding Applicant's claims 4 and 5, as discussed above Baig '611 is deemed to disclose aggregate particles with a mean diameter of 2,500 microns, which reads on the aggregate particles having an average particle mean diameter ranging from about 1,000 microns to about 3,000 microns, more specifically from about 1,400 microns to about 2,500 microns.

Regarding Applicant's claims 6-9, Baig '611 discloses that dual layer ceiling tile with calcium carbonate coating has a noise reduction coefficient (NRC) value of at least about 0.50 (*page 6, paragraph [0062]*).

Regarding Applicant's claims 15-17, the limitations "wherein the tile is made from wet pulp," "wherein the aggregate is pressed using a roller," and "wherein the aggregate is pressed using a plate" are method limitations and do not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113.

6. Claims 1-9 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotts (U.S. Patent No. 3,184,372) in view of Baig (U.S. Patent Application Publication No. 2002/0139611) and Forry et al. (U.S. Patent No. 4,585,685).

Regarding Applicant's claim 1, Cotts discloses an acoustical ceiling tile (*col. 1, lines 13-15*) having a core made from a starch gel and mineral wool fiber composition with the starch gel ranging from 75 to 83 weight percent (*approximately 79 weight percent*) of the core composition and the mineral wool fibers ranging from 17 to 25 weight percent (*approximately 17 weight percent*) of the core composition (*col. 3, lines 61-53*). The starch gel comprises at least about 82.7 weight % water (*approximately 94 weight percent, col. 3, lines 44-50*).

Cotts fails to disclose wherein the front surface of the tile is coated with aggregate particles.

Baig '611 discloses an acoustical ceiling tile with improved sound absorption (*title*) having a core (*fiber rich surface layer made of mineral wool fibers, paragraph 0021*) made from a starch gel (*starch binder of starch in the form of a gel, paragraph 0027*) and mineral wool fiber

(*fiber rich surface layer made of mineral wool fibers, paragraph 0021*) composition, wherein the front surface of the tile is coated with aggregate particles (*calcium carbonate particle coating, paragraph 0061*).

Baig '611 further disclose that the particles are coarse (*paragraph 0061*). It is noted that Applicant defines coarse particles as to have a mean diameter of 2,500 microns (*specification page 9, lines 28-30*). Therefore, Baig '611 is deemed to disclose particles with a mean diameter of 2,500 microns, which read on Applicant's claimed aggregate particles having an average particle mean diameter of at least about 1,000 microns.

Baig '611 fails to specifically disclose the aggregate particles are pressed into the front surface.

Forry discloses an acoustically porous building material (*title*) having a core (*dry-formed web, col. 3, lines 9-10*) made from a starch gel (*organic binder pregelled starch, col. 3, lines 64-66*) and mineral wool fiber (*fibrous material mineral wool, a.k.a. rock wool, col. 3, lines 56-57*) composition, wherein the front surface of the tile is coated with aggregate particles (*col. 3, lines 11-21 and figure 1*). The aggregate particles are pressed into the front surface, which creates a relatively non-friable surface (*col. 3, lines 2-3 and figure 3*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add a layer of aggregate particles as taught by Baig '611 to Cotts in order to improve sound absorption. Furthermore, it would have been obvious to one of ordinary skill in the art to press, embed, the aggregate particles in the front surface as taught by Forry in the combination of Baig '611 and Cotts in order to make the surface relatively non-friable.

The limitation “abuse-resistant” is a functional limitation and is deemed to be a latent property of the prior art since the prior art is substantially identical in composition and/or structure. MPEP 2145 (II).

The limitation “cast” is a method limitation and does not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113. Furthermore, there does not appear to be a difference between the prior art structure and the structure resulting from the claimed method because the combination of Cotts, Baig ‘611 and Forry discloses the same composition and structure for the claimed tile.

Regarding Applicant’s claims 2 and 3, Baig ‘611 discloses that the aggregate particles are selected from the group consisting of calcium carbonate, crushed marble, sand, clay, perlite, vermiculite, crushed stone and glass (*page 6, paragraph [0061]*). Furthermore, the aggregate particles are specifically calcium carbonate (*calcium carbonate particle coating, page 6, paragraph [0061]*).

Regarding Applicant’s claims 4 and 5, as discussed above Baig ‘611 is deemed to disclose aggregate particles with a mean diameter of 2,500 microns, which reads on the aggregate particles having an average particle mean diameter ranging from about 1,000 microns to about 3,000 microns, more specifically from about 1,400 microns to about 2,500 microns.



Regarding Applicant's claims 6-9, Baig '611 discloses that dual layer ceiling tile with calcium carbonate coating has a noise reduction coefficient (NRC) value of at least about 0.50 (*page 6, paragraph [0062]*).

Regarding Applicant's claims 15-17, the limitations "wherein the tile is made from wet pulp," "wherein the aggregate is pressed using a roller," and "wherein the aggregate is pressed using a plate" are method limitations and do not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113.

#### ***ANSWERS TO APPLICANT'S ARGUMENTS***

7. Applicant's arguments in the response filed November 16, 2009 regarding the 35 U.S.C. 103(a) rejection over Kahara or Cotts in view of Baig and Forry of record have been carefully considered but are deemed unpersuasive.

Applicant argues that the particles are not embedded in Baig and that they can not be embedded as in the Applicant's invention, because the particles in Baig are sprayed on the ceiling tile and then coated with paint. Therefore, the particles can not be pressed into the tile because it would ruin the finish of the tile.

The examiner has already contended that the particles in Baig are not embedded. Also, the examiner is only arguing add the particles from Baig's to Kahara, not the finish. Furthermore, one cannot show nonobviousness by attacking references individually where the

rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Forry teaches away from embedding aggregates to boards using a wet-laid process.

As states above, the limitations “wherein the tile is made from wet pulp,” “wherein the aggregate is pressed using a roller,” and “wherein the aggregate is pressed using a plate” are method limitations and do not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, David R. Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alicia Chevalier/  
Primary Examiner, Art Unit 1794  
12/16/2009